

A1  
concl<sup>2d</sup>

a phase modulator disposed in a first optical path of the first PM coupler;  
a piezo-electric transducer (PZT) disposed in a second optical path of the first  
PM coupler;  
a second PM coupler for recombining said first and second optical paths; and  
a detector for detecting the output from said second PM coupler.

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A2

11. (Amended) In a fiber optic communication system having at least one fiber optic modulator, a method of enhancing the performance of the communication system comprising:

providing an optical source;  
splitting signals from said optical source into first and second paths, said first and second paths forming a Mach-Zender Modulator (MZM) cavity;  
phase modulating the signals in said first optical path;  
controlling optical path length of said first and second paths;  
combining the signals in said first and second paths; and  
detecting the combined signals.

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A3

20. (Amended) A fiber optic link system for transmitting signals from a source to a destination having a fiber optic modulator, the fiber optic modulator comprising:

an optical source;  
a first polarization maintaining (PM) coupler for splitting a signal received from said source into two optical paths, said two optical paths forming a Mach Zender Modulator (MZM);  
a phase modulator disposed in a first optical path of the first PM coupler;

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a piezo-electric transducer (PZT) disposed in a second optical path of the first PM coupler;

a second PM coupler for recombining said first and second paths; and

a detector for detecting the output of said second coupler.

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[ Please add the following new claims: ]

22. (New) A fiber optic communication system comprising:

A4

a transmitter having a fiber optical modulator system, the fiber optical modulator system including:

an optical source;

a first polarization maintaining (PM) coupler for splitting a signal received from said optical source into first and second optical paths, said first and second optical paths forming a Mach Zender Modulator (MZM);

a phase modulator disposed in the first optical path;

a piezo-electric transducer (PZT) disposed in the second optical path;

a second PM coupler for recombining said signals from first and second optical paths; and

a detector for detecting output signals from said second PM coupler;

a receiver; and

a communication link for transmission of signals from the transmitter to the receiver.

23. (New) A fiber optic communication system having a fiber optic modulator, the modulator comprising: